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HISTORICAL NOTE



## Valentin Magnan and Sergey Korsakov: French and Russian pioneers in the study of alcohol abuse

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### ABSTRACT

This study focuses on two outstanding psychiatrists: the Frenchman Valentin Magnan (1835–1916) and the Russian Sergey Korsakov (1854–1900). Their international renown is primarily associated with their investigations into health consequences of alcohol consumption; they were pioneers in this field, and happened to know each other well. The similarities and differences are shown in social and scientific approaches adopted by these two scientists. In his work, Magnan focused mainly on absinthe and epilepsy; he considered alcoholism to be a hereditary mental disorder. Korsakov, after a period of work in Paris under Magnan's guidance, represented a more modern generation and was advancing fundamental ideas on the nature of psychoses and merging clinical features, somatic, psychological, and social factors. Although Magnan has practically disappeared from the current literature on alcoholism, Korsakov is still clearly present today.

### KEYWORDS

Alcoholism; France; Korsakov; Magnan; nineteenth century

## Introduction



In the course of the nineteenth century, the (excessive) consumption of alcohol increasingly attracted the attention of authorities and physicians. A growing number of alcoholics ended up in asylums, thus influencing the lives and activities of both patients and care-takers. This was the time when society and the medical community began to acknowledge the harmful effects of alcohol (Prestwich, 1997).

This study focuses on two outstanding psychiatrists: the Frenchman Valentin Magnan (1835–1916) and the Russian Sergey Korsakov (1854–1900). Their international renown is primarily associated with their investigations into health consequences of alcohol consumption; they were pioneers in this field, and happened to know each other well. We aim to illustrate similarities and differences in social and scientific approaches adopted by these two scientists.

## *Alcoholism in the nineteenth century*

The history of alcoholism has been described well by Sournia (1986). Bynum (1984) provided a detailed analysis of alcoholism in the nineteenth century. Both studies reveal

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that the number of individuals suffering from alcoholism increased steadily in the nineteenth century, leading to a rise in social problems. Although few statistics are available, alcohol consumption in nineteenth-century Russia seems to be comparable to that in other European countries. Whereas in France alcoholism was mostly observed in the industrial worker, in Russia it occurred predominantly among peasants (Sournia, 1986). Physicians became more and more involved in attempts to deal with alcoholism. To some extent, this may have been triggered by curiosity about the effects of alcohol on the body, brain, and behavior. However, the interest of psychiatrists was also raised because alcoholics threatened to become the largest population in the asylums.

A major step forward was taken by Swedish physician Magnus Huss (1807–1890). He had collected a series of case descriptions, published in Sweden in two volumes in 1849 and 1852, under the title *Alcoholismus chronicus eller chronisk alkoholssjukdom* [*Alcoholismus Chronicus or Chronic Alcohol Disorder*], and translated into German in 1852 (Huss, 1849, 1852; Sournia, 1986). On the basis of this series of cases, Huss tried to show that various types of symptoms could be distinguished: *neural* symptoms, in particular sensory-motor symptoms, and *psychic* disturbances. Among the psychic disturbances, he mentioned depression, mania, dementia, and severe amnesia. Moreover, he noted *physical* symptoms beyond the nervous system: vascular system pathology and stomach, liver, and heart disorders. Huss coined the word *alcoholism*. His work was recognized by his colleagues, and in 1854 he was awarded the Prix Montyon of the *Institut de France*.

Toward the end of the nineteenth and the beginning of the twentieth century, the main alcohol-related neurological syndromes were outlined: Wernicke encephalopathy (Wernicke, 1881), Korsakov syndrome (Korsakov, 1887b), and Marchiafava-Bignami disease (Marchiafava & Bignami, 1903). Wernicke's encephalopathy, also called Wernicke's disease, refers to the presence of neurological symptoms caused by biochemical lesions of the central nervous system after exhaustion of B-vitamin reserves, in particular vitamin B1, thiamine. Classically, German neurologist Karl Wernicke (1848–1905) encephalopathy is characterized by the triad ophthalmoplegia, ataxia, and confusion. Korsakov's syndrome is a manifestation of Wernicke's encephalopathy. The major symptoms are anterograde amnesia, retrograde amnesia, confabulation, minimal content in communication, lack of insight, and apathy. Finally, Marchiafava-Bignami disease (MBD) is a rare condition characterized by demyelination of the corpus callosum.

## Valentin Magnan

French psychiatrist Valentin Magnan (1835–1916; Figure 1) worked as the chief admitting psychiatrist of the Sainte-Anne Hospital from 1867 to the end of his career in 1912. In this asylum, he analyzed and classified psychiatric diseases and consistently worked to improve the medical care of the insane.

The Sainte-Anne Hospital in Paris was a unique institution not only for France but for the whole of Europe. In 1860, Baron Georges Haussmann (1809–1891), the prefect of the Seine, ordered a commission to consider how to reform institutional care. Two years later, it was decided to build a central asylum in Paris at the Sainte-Anne “farm,” where clinical teaching would take place and a separate building would house the admission service. This new institution, located in the southern part of Paris, became one of the most important places in France for the treatment, research, and teaching of mental diseases. When



**Figure 1.** Valentin Magnan (1835–1916).

Sainte-Anne opened its gates on May 1, 1867, the first male patient was an alcoholic. In the early years (until the Franco-Prussian war of 1870, when patients were evacuated), alcoholics constituted approximately 22% of the male population. Over the next 40 years, diagnoses of alcoholism accounted for 23.8% of male admissions, and in another 7.3% of cases, alcoholism was listed as a contributing factor (Prestwich, 1997).

Magnan was working on the problem of alcoholism in all its aspects, but particularly on the effect of absinthe, which was widely consumed in France. In his first year at Sainte-Anne, he presented a case report of a patient suffering from alcohol abuse. Magnan quickly became convinced that absinthe had a specific effect that differed from other alcoholic beverages. More specifically, he claimed that absinthe triggered epileptic convulsions (Eadie, 2009). In the words of Magnan (1864), “What distinguishes *absinthism* is first, the manifestly epileptic attack, the vertigo, the early onset of delirium and, finally, the complete loss of memory.” Magnan did not base his scientific work exclusively on clinical observations; he also actively performed experiments on animals such as dogs, cats, rabbits, guinea pigs, and various kinds of birds.

In 1869, one of his major publications appeared, a short monograph, *Étude Expérimentale et Clinique sur L'alcoolisme*. A few years later, Magnan described his empirical studies and views in an important monograph: *De l'alcoolisme, de diverses forms de délire alcoolique et de leur traitement* (1874a). He conceptualized alcoholism in terms of two extremes: (a) infrequent, accidental intoxication and (b) chronic alcoholism. He singled out a third group that was characterized by the development of persisting delusions. The first two groups could respond to a change in social milieu or occupation, whereas the last group was considered to be relatively incurable. In the same year, an English summary of this work appeared in *The Lancet*. Here, he rightly remarked that the “essence of absinthe is a valuable agent for the study of the mechanism of epilepsy” (Magnan, 1874b; Chazaud, 2003; Eadie, 2009).

Magnan was an adherent of Bénédict Morel's (1809–1873) degeneration theory of psychiatric disorders, rather popular in France in the second half of the nineteenth century. He believed that the paroxysm of drinking, so characteristic for dipsomaniacs, was an indication of a hereditary mental disorder. Magnan claimed that, if all complications of alcoholism were taken into account, alcoholism would be responsible for at least 50% of mental patients in Paris (Prestwich, 1997). Furthermore, he argued that the main difference between the effects of absinthe from those of alcohol is the manifestly epileptic attack, the early onset of the delirium, and the complete loss of memory (Sournia, 1986). Although absinthism was a variety peculiar to France, the elements of French typologies of alcoholism were influential in other countries, especially the neurological hereditary theory of Magnan. Gradually, Magnan formed a scientific school that was recognized not only in France but also abroad (Dowbiggin, 1996).

Although Magnan did not produce any serious scientific work on alcoholism after the 1880s, he remained active and was prominent in the social discussion on alcoholism. His work formed a central element in the scientific argumentation in this campaign against absinthe, which led to the banning of absinthe in 1905 in France (Luauté, 2007).

An examination of Magnan's published investigations suggests that his research was adequate by the standards of his time. He had shown that an alcohol-soluble component of wormwood did produce lapses of consciousness, myoclonic jerks, and tonic-clonic convulsions in animals. It is now impossible to determine whether that component, presumably thujone, was present at convulsant concentrations in some of the available absinthes of Magnan's time (Eadie, 2009).

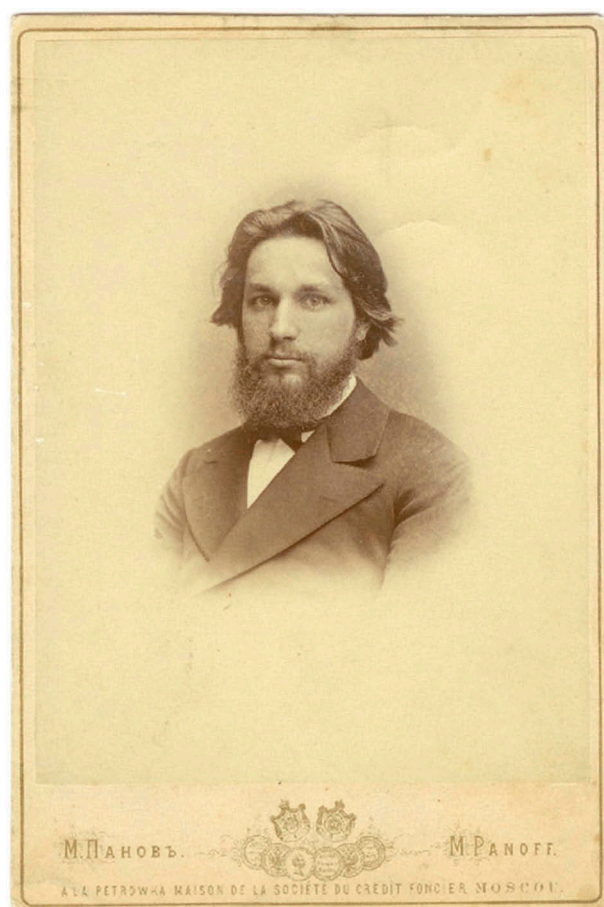
### **Russian pupils**

Paris was considered the international capital of psychiatry for much of the nineteenth century (Dowbiggin, 1996). Among many foreign physicians visiting Paris for traineeship was the founder of Moscow neurological school, Aleksei Yakovlevich Kozhevnikov (1836–1902). While in Europe (1866–1868), Kozhevnikov visited medical institutions and studied the way they were organized, in particular, the new Sainte-Anne Hospital in Paris, on which he wrote a detailed report for the authorities of the Moscow University (Kozhevnikov, 1867). When he became head of the Department of Nervous and Mental Diseases of Moscow University, he insisted that his young colleagues should study in Paris; he even considered this to be compulsory.

In particular, French neurologist Jean-Martin Charcot (1825–1893) played a crucial role in this educational exchange program. All the founders of modern neurology and psychiatry in Russia can be considered to be pupils of Charcot: Kozhenvikov, Korsakov, Lazar Minor (1855–1942), Vladimir Bekhterev (1857–1927) and Liverij Darkshevich (1858–1925) (Vein, 2011). Kozhevnikov also advised the 21-year-old Sergey Korsakov, who was appointed as his assistant in 1876, to go to Paris. There, Korsakov worked not only with Charcot in the Salpêtrière but also with Magnan in the Sainte-Anne Hospital, because of his particular interest in psychiatry.

### **Sergey Korsakov (1854–1900)**

On his return home, Korsakov became head of the Moscow University Psychiatric Clinic (Figure 2). He rapidly achieved an impressive career and was held in high esteem by his



**Figure 2.** Sergey Korsakov (1854–1900).

colleagues. When he died in 1900 at the age of 46, he left a complete and rather voluminous classification of mental diseases, reflecting not only his broad experience with mental disorders but also his great insight into the nature of these disorders. Korsakov's interest in the effect of alcohol on the mental and neurological state of patients was inevitably enhanced during his traineeship in Sainte-Anne Hospital (Vein, 2009).

Magnan was older than Korsakov and chief of the department, an author of two books on alcoholism, and it is therefore hard to imagine that the two did not discuss their views on this topic. This study is not about the personal relationship between Magnan and Korsakov. We did try, but were unable, to find any documentation on the matter. It is, however, clear that the two men knew each other well. They met not only in Paris but also in Moscow. Magnan attended the 12th International Medical Congress, held in Moscow in 1897, and was welcomed by Korsakov, a member of the Congress organizing committee. Magnan was elected an honorary member of the Russian Neurological and Psychiatric Society (Lisitsin, 1961). It was at that particular meeting that the German physician, Friedrich Jolly (1844–1904), read a paper on mental disorder in polyneuritis and suggested using the name *Korsakov's psychosis* (Flatau & Jacobsohn, 1897).



However, Magnan was not the only one in Paris interested in the effects of alcohol on the nervous system. It was actually Charcot who, in his experimental works, analyzed the connection between psychic disorders and polyneuritis associated with alcohol abuse. Charcot also considered alcohol, among other chronic intoxications, as one of many external causes of hysteria (Walusinski, 2011).

Korsakov was well aware of the state of psychiatry in Europe. His experience in Western Europe was not limited to his stay in Paris with Charcot and Magnan. In 1892, he visited Richard Freiherr von Krafft-Ebing (1840–1902), and in 1894 he traveled to the University of Heidelberg, where he met Emil Kraepelin (1856–1926), one of the most influential *belle-époque* psychiatrists. Korsakov presented his view on general psychopathology in his *Course of Psychiatry*, which was published a year after he passed away in 1901.

Korsakov's first study looked at alcoholic paralysis (Korsakov, 1887a). It contained one indirect reference to Magnan: Korsakov referred to Magnan's description of patients suffering from memory disorders after carbon monoxide poisoning. In Korsakov's (1887b) dissertation on alcoholic paralysis, he described the same kind of cases reported by Magnan, but in greater detail. In Korsakov's later works (1890a, 1890b), entailing case descriptions, there were references to German and French scientists, but not to Magnan. The same holds for Korsakov's next paper, written with his student Vladimir Serbsky (1858–1917), which appeared in 1892, a case description with a post-mortem examination. The paper gave an elaborate clinical description of a 27-year-old woman, suffering from an extra-uterine pregnancy. Korsakov referred to Albert Gombault (1844–1904), Albert Pitres (1848–1928), and Louis Vaillard, (1850–1935), who presumably observed the same psychotic condition as well as some peripheral aspects related to polyneuritis. Again, Magnan was not mentioned. The final two papers we examined were one published in the French journal *Revue Philosophique* (Korsakov, 1889), and one on confabulations titled, *Pseudoreminiscenzen* (Korsakov, 1891). The main goal of these papers appears to be the characterization of the memory disorder, in particular the delusions and memory falsifications, observed in patients with polyneuritis. In both, Korsakov mentioned several French authors known for their work on memory disorders, in particular, Théodule Ribot (1839–1916) and Charles Richet (1850–1935). But again, we found no trace of Magnan. However, in the subject index of Korsakov's *Selected Works* (Korsakov, 1954), in relation to the no-restraint treatment policy, Magnan is mentioned 13 times. Whatever influence Magnan's work on alcoholism may have had on Korsakov, it is not traceable in the latter's publications.

## Similarities and differences

Both Magnan and Korsakov were prominent, each in his own way, in their research on the relationship between the abuse of alcohol and mental disorders. Magnan in his experimental work focused mainly on absinthe and epilepsy. He considered alcoholism to be a hereditary mental disorder. Magnan, an envoy of the hard line of the alienist tradition, was actually no longer one of the progressive thinkers in psychiatry when Korsakov published his studies on alcohol abuse. Korsakov represented a more modern generation and was ahead of his time in advancing fundamental ideas on the nature of psychoses, and in merging clinical features and somatic, psychological, and social factors (Ovsyannikov & Ovsyannikov, 2007). In his studies and classification of mental diseases, Korsakov went further than nineteenth-century French alienists like Magnan. His approach was primarily nosological; he aimed to

demonstrate that the syndrome he had described was not exclusively the result of alcohol abuse, but could appear in combination with several other, quite disparate, medical conditions. However, interest in the role of toxic agents, including alcohol, was what these two scientists had in common.

In conclusion, Valentin Magnan and Sergey Korsakov may be regarded pioneers in the study of the effects of alcohol abuse. The two knew each other well but focused on different aspects of alcoholism in their studies, Magnan emphasizing the epileptic consequences of absinthe and Korsakov providing a detailed picture of the syndrome carrying his name. Although Magnan has practically disappeared from the current literature on alcoholism, Korsakov is still clearly present today.

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